

WHAT IS CLAIMED IS:

1. A transmitter comprising:  
packet disassembly means for  
5 disassembling a transmission data packet into a  
plurality of blocks;  
error detection code attaching means for  
attaching an error detection code to each of the  
blocks; and  
10 transmitting means for transmitting the  
blocks having the error detection code attached and  
re-transmitting designated blocks designated by  
retransmission information from an outside source.

15 2. The transmitter according to claim 1,  
further comprising:  
prioritizing means for attaching an  
order of priority to each of the blocks produced by  
the packet disassembly means; and  
20 coding means coding the blocks having  
the error detection code attached, by employing an  
error correction coding method compatible with the  
order of priority, before supplying the blocks to  
the transmitting means.

25 3. A receiver comprising:  
receiving means receiving blocks  
produced by disassembling a data packet;  
error detecting means for detecting an  
30 error in the received block;

retransmission information generating means for generating information relating to retransmission of the received block in accordance with a result of error detection by said error  
5 detecting means; and

packet recovering means for recovering the data packet by combining a plurality of received blocks.

10 4. The receiver according to claim 3, further comprising:

transmission path status estimating means for estimating a status of a transmission path for transmitting the blocks; and

15 process information generating means for generating process information requesting processes compatible with a result of estimation by said transmission path status estimating means.

20 5. The receiver according to claim 4, further comprising:

error correcting means subjecting the received block from said receiving means to an error correction process and outputting the  
25 received block subjected to the error correction process to said error detecting means, wherein

said transmission path status estimating means estimates the status of the transmission path, based on at least one of a signal to interference  
30 noise power ratio (SIR) of a received signal

detected by said receiving means, and a re-encoding error rate calculated by said error correcting means.

5                   6. The receiver according to claim 4,  
wherein said retransmission information generating means and said process information generating means form integral information generating means for generating an index code including retransmission  
10 information and process information, the index code being mapped into a combination of an indication of a need or a lack thereof for retransmission, and a requirement for processes related to retransmission.

15                   7. The receiver according to claim 6,  
wherein said information generating means is provided with a table that maps index codes into combinations of an indication of a need or a lack thereof for retransmission, and a requirement for  
20 processes related to retransmission, and wherein  
the index code is generated using the table.

25                   8. The receiver according to claim 7,  
wherein said information generating means is provided with a table defined for each of different types of transmission.

30                   9. A transmitter-receiver comprising a  
transmitter and a receiver, said transmitter

comprising:

packet disassembly means for disassembling a transmission data packet into a plurality of blocks;

5 error detection code attaching means for attaching an error detection code to each of the blocks; and

transmitting means for transmitting the blocks having the error detection code attached and  
10 re-transmitting designated blocks designated by retransmission information from an outside source, and said receiver comprising:

receiving means receiving blocks produced by disassembling a data packet;

15 error detecting means for detecting an error in the received block;

retransmission information generating means for generating information relating to retransmission of the received block in accordance  
20 with a result of error detection by said error detecting means; and

packet recovering means for recovering the data packet by combining a plurality of received blocks.

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10. A communication system comprising a transmitter and a receiver, said transmitter comprising:

packet disassembly means for  
30 disassembling a transmission data packet into a

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plurality of blocks;

error detection code attaching means for attaching an error detection code to each of the blocks; and

5 transmitting means for transmitting the blocks having the error detection code attached and re-transmitting designated blocks designated by retransmission information from an outside source, and said receiver comprising:

10 receiving means receiving blocks produced by disassembling a data packet;

error detecting means for detecting an error in the received block;

15 retransmission information generating means for generating information relating to retransmission of the received block in accordance with a result of error detection by said error detecting means; and

20 packet recovering means for recovering the data packet by combining a plurality of received blocks.

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